

GOVERNMENT OF TELANGANA
ABSTRACT

PRED – Construction of Internal roads with cement concrete under MGNREGS and other grants – Technical and General implementation guidelines – Orders - Issued.

PANCHAYAT RAJ & RURAL DEVELOPMENT (PROGS.I) DEPARTMENT

G.O.Rt.No. 63

Dated: 27-01-2017

Read the following:

1. G.O. Rt. No: 21 PR & RD (Progs I) Department dt-10.01.2017
2. From the ENC PR Lr No:AE/3079/MGNREGSD/2016, dt 17.01.2017

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ORDER:

In the reference 1st read above, Government have issued guidelines for construction of Internal cement concrete roads without drains under MGNREGS in convergence with Gram Panchayats or any other funds.

2. The Engineer-in-Chief, Panchayat Raj in the reference 2nd read above has submitted proposals to issue of technical and general implementation guidelines for construction of cement concrete pavements for internal village roads under MGNREGS in convergence with other grants and also for CC internal roads sanctioned under various state grants like CRR, SDF etc.

3. The Engineer-in-Chief, Panchayat Raj has further informed that Panchayat Raj field Engineers and PR Engineers Association have represented to accord permission to adopt nominal mix(1:2:4) cement concrete equivalent to M20 grade for internal village CC roads on which nil or very less occasional commercial vehicle traffic is expected. M30 design mix concrete as per IRC:-Sp:62-2014 is unable to be achieved by GPs/ VLCs engaged on nomination basis as they are semi skilled agencies having minimal technical skills and also presence of PR AEE/AE during concreting at every site is not feasible in view of several works being executed by them in a Mandal apart from other non-technical duties like Haritha haram etc., entrusted by District Collectors. Also to avoid damage to CC roads being executed now due to simultaneous ongoing program of laying drinking water pipe lines under Mission Bhagiradha certain general implementation guidelines need to be issued.

4. Government after careful examination and consideration of the proposal, hereby accord permission the following technical and general implementation guidelines for construction of Internal village roads with cement concrete under MGNREGS and other State grants.

- i. Internal village/ habitation roads are subjected to very less traffic intensity (0 to 50 cvpd) and are executed by semiskilled agencies like GPs/ VLCs etc., which are having minimal technical knowledge. It is therefore not appropriate to consider IRC SP 62-2014 for fixing grade of cement concrete. Hence, permission is here by accorded to adopt a nominal mix VCC(1:2:4) (i.e, cement: fine aggregate: coarse aggregate) equivalent to M20 grade as per IS 456-2000 with 330 kgs of cement per cubic meter of concrete for internal CC roads. Proper curing for 28 days shall be ensured to gain required strength.
- ii. A minimum thickness of pavement of 150mm shall be adopted for internal CC roads as per clause 4.6 of IRC Sp:62-2014. However any village main road which is a part of main link/ through habitations connecting road or any internal road which is likely to be subjected to high traffic in view of local development parameters, the thickness of CC pavement shall be as per design as per IRC:-Sp:62-2014 adopting M30 design mix concrete.

- iii. Joint spacing shall be limited to 2.50 m or 3.25 m depending on carriage way width for internal CC roads.
- iv. Sub-grade and sub-base: generally sub-grade soil of existing old internal road in villages will be of well compacted soil. Depending on nature of sub-grade soil and degree of compaction of sub-grade, Granular Sub Base (GSB) of thickness 100 to 150 mm shall be provided. Wherever GSB of required thickness and compaction is already existing further laying of GSB is not required. Sub-base shall be prepared and provided in such a way that concrete slabs are supported uniformly as load carrying capacity of CC roads lies mainly on the structural rigidity of CC pavements and uniformity of sub-grade support.
- v. It is exceedingly difficult and costly to alter concrete once placed. Hence both technical and organizational quality assurance measures shall be ensured. For all CC road works, cubes shall be casted during execution and tested. Test results shall fall within specified permission limits for VCC(1:2:4) equivalent to M20 grade. If the average compressive strength of the concrete is less than 85% of M20 grade the work has to be rejected.
- vi. In case of doubt regarding the grade of concrete used either due to poor workmanship or based on results of cube strength tests, core test shall be conducted. Core test shall be considered acceptable if the average equivalent cube strength of the cores is equal to at least 85% of the cube strength of the M20 grade of concrete specified for corresponding age and no individual core has strength less than 75%. If the core strength falls below these limits the work has to be rejected and the cost to be recovered from the GP/ VLCs duly initiating action against the officers responsible. The charges for core tests may be met from 0.5% QC charges provision made in the estimate.
- vii. The SE/EE have to ensure to check measure the works as per instructions issued vide Govt. Memo No: 42243/ Estt(1)/ 99-2, dated: 09-02-2000. The works shall also be inspected by department V & QC wing before making final payments.
- viii. To avoid damage to CC roads in view of ongoing program of laying of water supply pipe lines under Mission Bhagiradha, ducts/ conduits with RCC NP2 class pipes of required diameter shall be provided at road junctions and road crossings in consultation with RWS & S Department and Gram Panchayat. For accommodating intra village and main water pipe lines and to facilitate individual house connections without cutting CC roads, the conduits of required diameter ranging from 200 to 450 mm as appropriate may be provided at required locations as per the approved pipe line layout, before laying of CC road. For laying house connection pipe line 200mm dia conduits at spacing of 15m interval compulsorily. Sufficient cushion on NP2 RCC conduits ranging depth from 450 mm to 600 mm may be provided to prevent damage to the conduits. Where ever high traffic is expected 100 mm thick (1:4:8) CC may also be laid over the pipe for uniform distribution of pressure. Similarly wherever cross drainage works are required same shall also be provided before execution of CC roads.
- ix. In exceptional case where cutting of CC road for laying pipe line is inevitable prior permission of PR department shall be obtained. The road cutting shall be got done with Jack hammer. Heavy machinery like JCB which damages road surface substantially should not be used. Further the CC road shall be brought back to its original condition on their own cost by the agency which has cut the road to the satisfaction of PR Engineer-in-Charge.
- x. Carriage way of internal CC roads may vary between 2.5m and above depending on availability of right of way and importance of road. To facilitate laying of water pipe lines and construction of side drains, minimum berm width of 0.60m shall be left as shoulders on either side of the CC road. If the lane idth

is very less, side berm/ shoulder of 0.60m wide shall be left at least on one side without fail, for laying water pipe line and to avoid breakage of CC roads. Side berms shall be well compacted after laying pipe lines and suitable plantation may also be taken up for environmental protection where ever space is available.

5. The Engineer-in-Chief, Panchayat Raj, Hyderabad shall take necessary action accordingly.

(BY ORDER AND IN THE NAME OF THE GOVERNOR OF TELANGANA)

**S.P.SINGH
CHIEF SECRETARY & SPECIAL CHIEF
SECRETARY TO GOVERNMENT (FAC)**

To

The Engineer-in-Chief Panchayati Raj, Hyderabad.

The Engineer-in-Chief RWS &S, Hyderabad.

The Director, Rural Development, Hyderabad.

The District Collectors in the Telangana State.

Copy to:

The Chief Engineer (V&QC), Panchayat Raj, Telangana.

The Regional Officers(SEs) Panchayat Raj, Telangana.

The District Panchayat Raj Engineers(DPRES/EEs) PR Telangana

The Chief Executive officers, ZPs in the State.

The District Panchayat Officers in the State.

The Chief Quality Control Officers, MGNREGS.

The PS to Hon'ble Minister (PR & RD).

//FORWARDED BY ORDER//

SECTION OFFICER